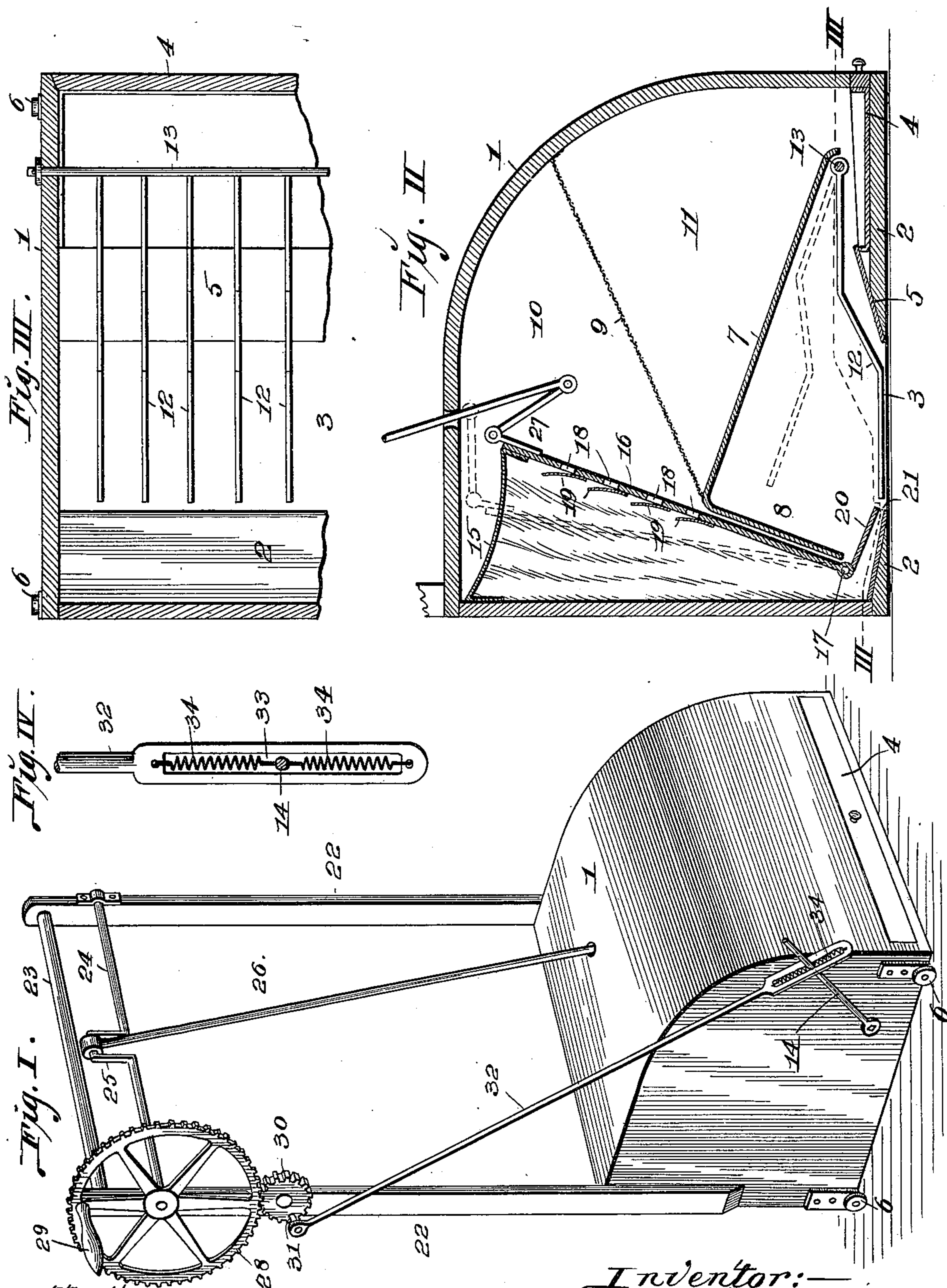


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(No Model.)



attest
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Inventor:—
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UNITED STATES PATENT OFFICE.

ADAM BURKHOLDER, OF ST. LOUIS, MISSOURI.

CARPET-CLEANING MACHINE.

SPECIFICATION forming part of Letters Patent No. 659,434, dated October 9, 1900.

Application filed December 30, 1899. Serial No. 742,062. (No model.)

To all whom it may concern:

Be it known that I, ADAM BURKHOLDER, a subject of the Queen of Great Britain, residing at the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Carpet-Cleaning Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of carpet-cleaning machines designed for use in traversing carpets while lying on the floor to remove the dust and dirt therefrom without the necessity of taking the carpet from the floor.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a perspective view of the machine. Fig. II is a vertical cross-sectional view through the housing of the machine and the parts contained thereby. Fig. III is a horizontal sectional view taken on line III III, Fig. II. Fig. IV is an enlarged detail view of the lower end of the beater-operating connecting-rod and springs arranged therein.

1 designates the housing of the machine, which may be of any desirable shape and is provided with a bottom 2, having an opening 3 therein.

4 designates a dust-pan inserted through one of the walls of the housing and adapted to rest on the bottom 2, as seen in Fig. II.

5 is an inclined plate located over the inner edge of the dust-pan 4 when inserted in the housing and that leads to the opening 3, where it is adapted to come into close contact with the carpet over which the machine is moved for the purpose of gathering any heavy particles of dirt to convey them into the dust-pan.

The housing 1 is provided with rollers 6, on which the machine is carried in the operation thereof.

7 designates a partition located within the housing 1, extending from a point over the dust-pan toward the wall at the opposite side of the housing and formed with a downwardly-projecting extension 8.

9 designates a screen of fine mesh connect-

ed to the housing 1 and the partition 7, thereby dividing the interior of the housing into two compartments 10 and 11.

12 designates beaters mounted on a shaft 13, loosely fitted in the side walls of the machine-housing, the free ends of the beaters extending into the opening 3 in the housing-bottom 2, where they are adapted to be raised and lowered into contact with the carpet traversed by the machine in the manner herein- after described.

15 designates a bellows-diaphragm connected to a movable bellows-board 16, pivoted at 17. The bellows-board 16 is provided with a series of apertures 18 and flap-valves 19, attached to the inner face of the board at the apertures, such valves being adapted to swing inwardly to uncover the apertures for the passage of air therethrough from the compartment 10 to the bellows and to be moved over the apertures to prevent backward flow of air from the interior of the bellows to the compartment 10.

20 designates a plate extending from the pivot 17 of the bellows-board 16 to the opening 3 in the bottom of the machine-housing in such position as to produce an air-outlet 21 between the bottom of the housing and said plate at the opening 3 and at the lower extremity of the bellows.

22 designates uprights secured to the housing 1 and joined at their upper ends by a cross-bar 23. Journaled to the uprights is a crank-shaft 24, that is provided with a crank 25, to which is connected a rod 26. The rod 26 extends through the housing 1 and is connected to a link 27, pivotally joined to the bellows-board 16, so that the operation of the connecting-rod 26 communicates movement to the bellows-board to move it to and fro and operate the bellows.

Mounted on the crank-shaft 24 is a toothed wheel 28, provided with a handle 29, through means of which the crank-shaft is turned. The toothed wheel 28 meshes with a pinion 30, journaled in one of the uprights 22 and provided with a crank-pin 31, that receives the connection of a rod 32. The rod 32 is provided at its lower end with a slot 33, within which is secured one end of each of a pair of

springs 34, the opposite end of the springs being joined to the rocking arm 14, carried by the shaft 13, and the beaters 12. The springs 34 provide connection between the rod 32 and the rocking arm 14, the connection being of an elastic nature, so that the beaters are operated without sudden jar in striking the carpet, but instead with a noiseless and easy stroke.

10 In the operation of the machine it is pulled over the carpet to be cleaned and the toothed wheel being turned by grasping the handle 29 the crank-shaft 24 is rotated to impart movement to the connecting-rod 26. In the

15 turning of the toothed wheel 28 the pinion 30 has motion imparted to it to move the rod 32 and raise and lower the beaters 12, so as to beat the dust from the carpet. As the connecting-rod 26 is reciprocated the bellows-

20 board 16 is moved backward and forward and air is forced from the bellows through its outlet 21 against the dust raised from the carpet by the beaters. A blast of air from the bellows carries the dust over and into the dust-pan 4,

25 part of it settling into the dust-pan, while the heavier particles pass into the compartment 11 and settle on the partition 7, from which they fall to the dust-pan. A current of air passes through the fine screen 9 into the compartment

30 10 and therefrom again into the bellows through the valved apertures 18, thereby making a complete circulation throughout the machine, which is kept up continuously. The screen 9 is of so close a mesh that the dust is

35 prevented from passing therethrough into the compartment 10 and must necessarily remain in the compartment 11 and in the dust-pan after it has been carried thereto.

I claim as my invention—

1.. In a carpet-cleaning machine, the combination of a housing provided with an opening in the bottom thereof, beaters arranged to operate in said opening, dust-receiving means contained by said housing, a bellows located within said housing connected to one of the walls thereof, having communication with the interior of the housing, and having its outlet arranged at the opening in the bottom of the housing, and means for operating said beaters and bellows; substantially as described.

2. In a carpet-cleaning machine, the combination of a housing, beaters arranged therein, means for operating said beaters, a partition located above said beaters, dust-receiving means located within said housing, a bellows having its outlet located in proximity to said beaters, said bellows being provided with communication with the interior of said housing above said partition, and means for operating said bellows; substantially as described.

3. In a carpet-cleaning machine, the combination of a housing, a screen dividing said housing into two compartments, a bellows arranged in one of said compartments, beaters, a rocking arm carried by the shaft of said beaters, and a driven connecting-rod provided with a slot adapted to receive said rocking arm, springs connected to said rod and to said arm, and means for operating said rod and said bellows, substantially as described.

ADAM BURKHOLDER.

In presence of—

E. S. KNIGHT,
M. P. SMITH.